PATENT
0171-1058P

IN THE U.S. PATENT AND TRADEMARK OFFICE

Applicant: HATAKEYAMA, Jun et al

Appl. No.: NEW Group:

Filed: January 29, 2004 Examiner:

For: POLYMER, RESIST COMPOSITION AND PATTERNING PROCESS

INFORMATION DISCLOSURE STATEMENT
(SUBMISSION CONCURRENT WITH THE FILING OF A NEW PATENT APPLICATION)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 29, 2004

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on PTO-1449, attached hereto.

II. COPIES

a. ☐ This application was filed before June 30, 2003. Accordingly, submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed.

b. ☒ This application was filed on or after June 30, 2003. Accordingly, copies of cited US patents and patent application publications therefore are not included. Copies of foreign patent documents and non-patent literature are included.

c. ☐ This application is a National Phase of a PCT application. Some or all of the documents listed on the PTO-1449 are not enclosed because they were cited in the International Search Report and copies should be forwarded from the International Search Authority. If copies are needed, please contact the undersigned.

III. CONCISE EXPLANATION OF THE RELEVANCE
(check at least one box)

a. ☒ **DOCUMENTS IN THE ENGLISH LANGUAGE**

The patents, publications, or other information listed on the attached PTO 1449 are in the English language and therefore, do not require a statement of relevancy.

b. ☒ **DOCUMENTS NOT IN THE ENGLISH LANGUAGE**

A concise explanation of the relevance of all patents, publications, or other information listed that is not in the English language is as follows:

The relevancy of the Japanese language documents can be determined from a review of the English language Abstracts attached thereto.

c. ☐ **ENGLISH LANGUAGE SEARCH REPORT**

An English language version of the search report or action that indicates the degree of relevance found by the foreign office is attached, thereby satisfying the requirement for a concise explanation. See MPEP 609(III)(A)(3).

d. ☒ **OTHER**

The following additional information is provided for the Examiner's consideration.

JP 2001-158808 corrsponds to US Patent No. 6,492,089.

Docket No. 0171-1058P

FEES

This Information Disclosure Statement is being filed concurrently with the filing of a new patent application; therefore, no fee is required.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By _____
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Attachment(s): ☒ Form PTO-1449(s)
☒ Documents
☐ Foreign Search Report
☐ Fee
☐ Other: _____

(Rev. 09/30/03)

Form PTO-1449	ATTY. DOCKET NO. 0171-1058P	APPLICATION NO. NEW
INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	APPLICANT HATAKEYAMA, Jun et al	
	FILING DATE January 29, 2004	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	Kind	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	US 4,491,628		1985-01-01	Ito et al.			
	US 5,310,619	A	1994-05-10	Crivello et al.			
	US 6,492,089	B2	2002-12-10	Hatakeyama et al.			
	US 2003/0224291	A1	2003-12-4	Hatakeyama et al.			

FOREIGN PATENT DOCUMENTS

	Office	DOCUMENT NUMBER	Kind	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES	TRANSLATION NO
	JP	2-27660	B2	1990-06-19	JAPAN			ABS	
	JP	63-27829	A	1988-02-05	JAPAN			ABS	
	JP	9-73173	A	1997-03-18	JAPAN			ABS	
	JP	10-10739	A	1998-01-16	JAPAN			ABS	
	JP	9-230595	A	1997-09-05	JAPAN			ABS	
	WO	97/33198		1997-09-12	WO				
	JP	6-118651	A	1994-04-28	JAPAN			ABS	
	JP	10-324748	A	1998-12-08	JAPAN			ABS	
	JP	11-302382	A	1999-11-02	JAPAN			ABS	
	JP	2002-055456	A	2002-2-20	JAPAN			ABS	
	JP	9-110938	A	1997-4-28	JAPAN			ABS	
	JP	2001-278918	A	2001-10-10	JAPAN			ABS	
	JP	2001-158808	A	2001-6-12	JAPAN			ABS	

OTHER DOCUMENTS (Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.

	International Work Shop 157nm Lithography MIT-LL, Boston, MA May 5, 1999
	Kunz et al., Outlook for 157 nm resist design, J. Vac. Sci. Technol., B17 (6), Nov/Dec 1999, pp. 3267-3272
	Chiba et al., 157nm Resist Materials; A Progress Report, J. Photopolymer Sci. and Technol., Vol. 13, No. 4 (2000) pp. 657-664
	Schmaljohann et al., Fundamental Studies of Fluoropolymer Photoresists for 157 nm Lithography, J. Photopolymer Sci. and Technol., Vol. 13, No. 3 (2000) pp. 451-458

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	US						
	US						

FOREIGN PATENT DOCUMENTS

	Office	DOCUMENT NUMBER	Kind	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES	TRANSLATION NO

OTHER DOCUMENTS (Include Name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.

	Brunsvold et al., Evaluation of a Deep UV Bilayer Resist for Sub-Half Micron Lithography, SPIE Vol. 1925 (1993), pp. 377-387
	Hatakeyama et al., Investigation of Discrimination Enhancement in Polysilsesquioxane Based Positive Resist for ArF Lithography, SPIE Vol. 3333 (1998), pp. 62-72
	Schaedeli et al., Evaluation of Materials for 193-nm Lithography, J. Photopolymer Sci. and Technol., Vol. 9, No. 3 (1996), pp. 435-446
	Kessel et al., Novel Silicon-Containing Resists for EUV and 193 nm Lithography, SPIE Vol. 3678, (1999), pp. 214-220
	Lin et al., A High Resolution 248 nm Bilayer Resist, SPIE Vol. 3678, (1999), pp. 241-250
	Boardman et al., Chemical Aspects of Silicon-Containing Bilayer Resists, SPIE Vol. (1999), 3678 pp. 562-572
	Kim et al., Chemically amplified resist based on the methacrylate polymer with 2-trimethylsilyl-2-propyl ester protecting group, SPIE Vol. 3999 (2000), pp. 420-428
	Ushirogouchi et al., Advanced Materials For 193-nm Resists, SPIE Vol. 3999 (2000), pp. 1147-1156

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